



MCM
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ERIE COUNTY NEXT GENERATION PUBLIC SAFETY RADIO SYSTEM

OCTOBER 11, 2018

CONTRACT AWARD

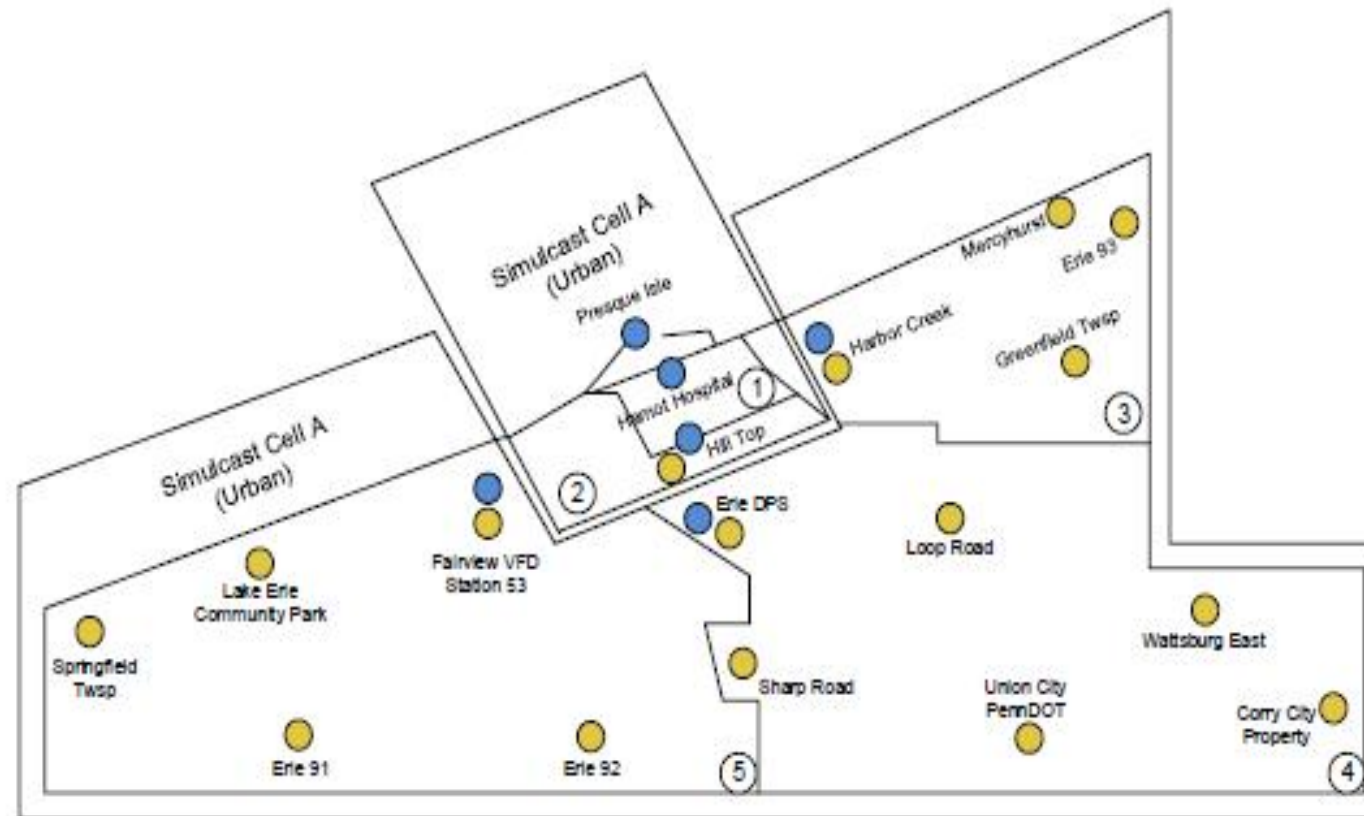
- **August 16, 2016**

Contract award to E. F. Johnson.

E. F. Johnson was the only vendor to meet our technical specification as defined by our RFP and took no exceptions.

SYSTEM OVERVIEW

- E.F. Johnson design: **22 site (18 physical sites)**, UHF P25 Phase II Simulcast Trunked System consisting of TWO simulcast cells (A and B), FIVE operational zones, as illustrated in the diagram below.



SYSTEM OVERVIEW

- 6 site, 6 channel P25 Phase 2 trunk Simulcast cell 1.
- 16 site, 6 channel P25 Phase 2 trunk Simulcast cell 2.
- 2 County-wide, analog UHF Simulcast Dispatch / Paging Frequencies.
 - Millcreek EMS / Fire
 - County EMS / Fire

SYSTEM OVERVIEW

- EMS / Fire Departments: (City of Erie)
 - EmeryCare
 - 1 repeated trunked simulcast dispatch talk group
 - 1 repeated trunked simulcast operational talk group
 - Erie City Fire Department
 - 1 repeated trunked simulcast dispatch talk group
 - 2 repeated trunked simulcast operational talk groups

SYSTEM OVERVIEW

- EMS / Fire Departments: (County)
 - 1 County-wide repeated trunked simulcast operational talk group
 - 4 Zoned repeated trunked simulcast operational talk groups
 - 4 operational talk groups per zone
 - Portable and mobile equipment will have at least 2 low power simplex channels to conduct on the ground operations.
 - Note: There is no plan to monitor these channels at the 911 dispatch center.

SYSTEM OVERVIEW

- Hospitals: (Erie County)
 - 4 Hospital medical command repeated talk groups
 - Corry Memorial
 - Millcreek Community
 - Saint Vincent
 - UPMC Hamot

SYSTEM OVERVIEW

- Police Departments: (City of Erie)
 - Erie City Police Department
 - 1 repeated trunked simulcast dispatch talk group
 - 5 repeated trunked simulcast operational talk groups

SYSTEM OVERVIEW

- Police Departments: (Millcreek)
 - Millcreek Police Department
 - 1 repeated trunked simulcast dispatch talk group
 - 2 repeated trunked simulcast operational talk groups

SYSTEM OVERVIEW

- Police Departments: (County)
 - County-wide repeated trunked simulcast operational talk group
 - 3 Zoned repeated trunked simulcast dispatch talk groups
 - 3 Police zones with 2 operational talk groups per zone

SYSTEM OVERVIEW

- Police Departments: (County Detectives / Sheriff)
 - Erie County Detectives / Sheriff
 - 1 repeated trunked simulcast dispatch talk group
 - 1 repeated trunked simulcast operational talk group

SYSTEM OVERVIEW

- Police Departments: (University)
 - University Police Departments
 - 4 repeated trunked simulcast operational talk groups
 - Edinboro
 - Gannon
 - Mercyhurst
 - Penn State Behrend

SYSTEM OVERVIEW

- Emergency Management Agencies(s)
 - 2 County-wide repeated trunked simulcast talk groups
- Hazardous Materials Response Team
 - 2 County-wide repeated trunked simulcast talk groups

SYSTEM OVERVIEW

- Erie County and E.F. Johnson have agreed to provide the below interoperability:
 - Redundant ISSI connection (2) = Ohio MARC, STARNET VHF, STARNET 800MHz.
 - **Four (4) VHF Interop's = Chautauqua Co., Conneaut City Fire, Conneaut City PD, and Monroe Township Fire.**
 - Four (4) UHF Interop's = Government West, Government North, Government Northeast, and Fire Central.
 - **Warren County Low Band using Zetron ARG, will change to ISSI when they transition to the state-wide system.**
 - Med Corry (New E.F. Johnson Analog RPT) and Med Erie (New E.F. Johnson Analog RPT) for out of county EMS agencies.

SINCE THEN...?

- Finalized system design for radio and microwave systems
- FCC licensing acquired
- Land (Site) acquisition
- Radio equipment ordered
- Microwave equipment ordered
- Pre-construction engineering and surveying
- New tower and site construction*
 - Phase I (Eight new tower sites)
- Colocation site construction
 - Phase II (Ten co-located sites)
- Installation
 - Subscriber equipment
 - Infrastructure

SINCE THEN...

- **FCC Licensing**
- Successful licensing of 14 frequencies **pairs** to be distributed across **22** sites.
 - Twelve (12) paired frequencies for the trunked portion of the system. (The twelve paired frequencies operating in a Phase II configuration effectively provides twenty (24) **talk paths**)
 - Two (2) analog simplex frequencies for dispatch / paging operations.
- Additional paired and simplex frequencies have been secured to conduct on-scene operations.
 - Note: There is no plan to monitor these channels at the 911 dispatch center.

SINCE THEN...

- **Radio Equipment**

- Radio infrastructure equipment was ordered and received from E.F. Johnson.
- Dispatch console system equipment was ordered and received from E.F. Johnson.
 - The new dispatch console system was installed and went live on February 14, 2017, prior to the implementation of the new public safety radio system.
- Subscriber units were ordered and received from E.F. Johnson.
 - Agencies can order (at their expense) additional subscriber equipment at the discounted bid rate until December 31, 2019.

SINCE THEN...

- **Site Acquisition**

- Determined locations for eight (8) new tower sites.
 - Entered into lease agreements with municipalities, state & local fire departments.
- Colocation at existing sites
 - State tower sites (ERIE 40, ERIE82, ERIE91)
 - American Tower (Wayne Township)
 - Hilltop Road (City of Erie)
 - Mercyhurst University
 - UPMC Hamot Hospital

SINCE THEN...

- **Pre-construction Engineering and Surveying**
 - Bid request for engineering and surveying services
 - Evaluation and award
 - Awarded to KCI Technologies
 - Work completed includes:
 - Building / Zoning permits
 - Core borings
 - Construction drawings
 - Environmental studies (NEPA/SHPO)
 - Utility coordination

SINCE THEN...

- **Eight New Tower Sites**
 - Requirements determined for:
 - Tower Steel, Equipment Shelters & Emergency Generators
 - Bid request for procurement
 - Evaluation and award:
 - Towers awarded to Daley Tower
 - Shelters awarded to VFP Shelters
 - Generators awarded to Lake City Power Systems (Palco)

SINCE THEN...

- **New Tower and Site Construction (Phase I)**
 - Requirements identified
 - Bid request for general construction and electrical contractors
 - Evaluation and award
 - General construction awarded to Perry Construction
 - Electrical awarded to Keystone Electric
 - Construction
 - Coordinated effort involving Erie County, MCM, KCI, Perry Construction, Keystone Electric and property managers.

SINCE THEN...

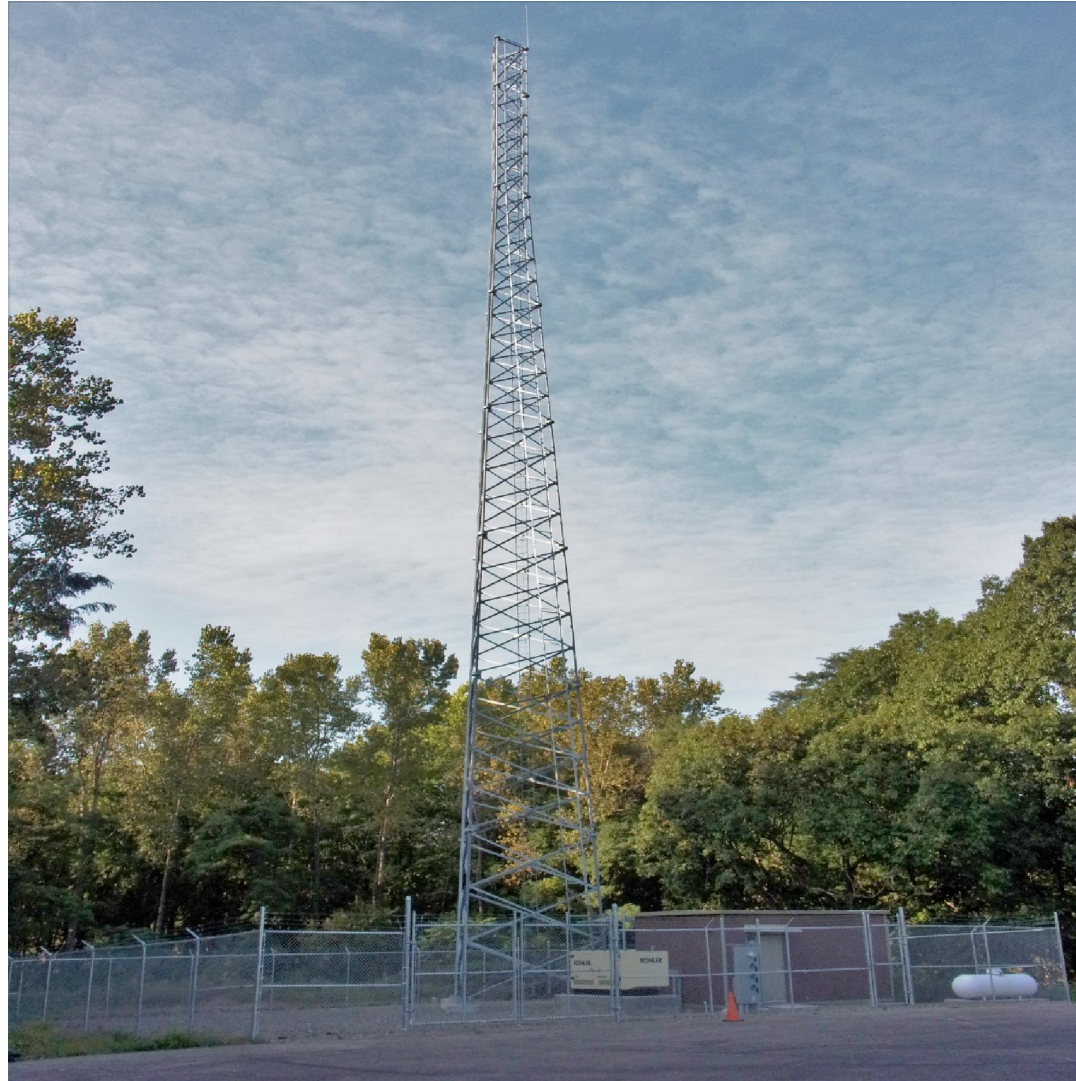
- New Tower and Site Construction (Phase I)

- 7 new tower sites
- Corry City – completed
 - Fairview – completed
 - Greenfield – completed
 - Harborcreek - completed
 - Loop Road - completed
 - Springfield - completed
 - Union City PDOT – in progress
 - (delayed lease agreement)

CORRY CITY SITE



FAIRVIEW SITE



GREENFIELD TOWNSHIP SITE



HARBORCREEK SITE



LOOP ROAD SITE



SPRINGFIELD TOWNSHIP SITE



SINCE THEN...

- **Colocation Site Construction (Phase II)**
 - Requirements identified
 - Bid request for general construction and electrical contractors
 - Evaluation and award
 - General construction awarded to E. E. Austin Construction
 - Electrical awarded to Newco Electric
 - Construction
 - Coordinated effort involving Erie County, MCM, KCI, E. E. Austin Construction, Newco Electric and property managers

SINCE THEN...

- **Colocation Site Construction (Phase II), in progress...**
 - 1 new tower site
 - Lake Erie Community Park (Girard Township)
 - Originally the Elk Creek Access site
 - 5 collocated sites
 - American Tower Site – Wattsburg East
 - American Tower Site – Wattsburg Wheelock
 - State ERIE91
 - State ERIE82
 - UPMC Hamot Hospital

SINCE THEN...

- **Installation – Subscriber Equipment**
 - E. F. Johnson Technical Service Team inspected, tested and upgraded to latest software release.
 - E. F. Johnson subcontracted with Mobilcom to conduct installation of control stations and mobile radios.

SINCE THEN...

- **Installation – Subscriber Equipment**
- Phase I (100% Completed)
 - Early distribution and installation of mobile radios (20 agencies)
 - Subscriber radios distributed to departments utilizing UHF conventional today
 - 19 EMS / Fire Departments and City of Erie Police Department

SINCE THEN...

- **Installation – Subscriber Equipment**
- Phase II (90% Completed)
 - Installation of remaining mobile radios and control stations
 - Summary of radios installed as of 9/27/2018:
 - 248 mobile radios installed
 - 38 control stations installed

SINCE THEN...

- **Siren Controllers**

- Requirements identified
- Bid request for equipment and installation services
- Evaluation and award
 - Awarded to Mobilcom
- 27 fire stations or municipalities identified as having operable audible (siren) alert systems

WHAT'S NEXT...

- Complete site construction (Phase II).
- Complete installation of remaining subscriber radios and control stations.
- Complete installation of microwave and radio systems:
 - Mobilcom began installation of system infrastructure in September 2018.
 - Nokia began installation of microwave system in October 2018.
- New radio system will be installed and operational by the end of this year (2018).

FLOWER ROAD RADIO SYSTEM



SHARP ROAD MICROWAVE SYSTEM



SHARP ROAD MICROWAVE SYSTEM



WHAT'S NEXT...

- **Acceptance Testing**
 - E.F. Johnson recommends 30 Day “burn-in period.”
- Three (3) Phases of Acceptance Testing:
 - Site acceptance testing
 - To confirm each site is performing to specifications
 - System acceptance testing
 - To confirm system across ALL sites is performing to specifications
 - Final acceptance testing
 - To confirm system requirements meet or exceed required specifications
 - Anticipated for late spring-early summer 2019 with full foliage

WHAT'S NEXT...

- **User Training**
- Regional Training Sessions will be conducted during the 1Q2019
 - Operation of P25 Radio System
 - Five (5) Zone Configuration
 - Talk Groups
 - Operational Procedures
 - Law Enforcement Radio Procedures Manual
 - EMS / Fire Radio Procedures Manual
 - Date, Time & Locations to be determined

WHAT'S NEXT...

- **Cutover Plan**
- The cutover plan will allow users to smoothly transition to the new system without major disruptions. The plan will be divided into three phases:
 - Phase I - Pre-Cutover Preparation. Consists of careful planning that results in a comprehensive cutover plan with a timeline of events leading up to and following the transition to the new P25 system.
 - Phase II - Cutover Execution. The goal is to execute Phase I planning activities while maintaining current system operations. Site testing will occur with participation amongst public safety users to test the functionality of the full system.
 - Phase III - Post-Cutover. This final phase is focused on removing obsolete components that are no longer needed for new systems operations (i.e., legacy RF infrastructure, consoles, etc.).
- Cutover or Go-live is anticipated by the end of 1Q2019.

WHAT'S NEXT...

- **Cutover will occur across the five (5) zones:**
 - Zone 1: City of Erie
 - Zone 2: Millcreek Township
 - Zone 3: East County
 - Zone 4: West County
 - Zone 5: South County
- Note: The transition of public safety users, by zone will occur within days of each other.

CONCLUSION:

- The goal of the project is to migrate current county radio systems to a common platform, providing a technologically advanced communications system that meets the needs of all Erie County residents and our first responders.
- Erie County Department of Public Safety will not transition users onto the new P25 Radio System until “system acceptance” testing has been successfully completed, training has been conducted and confidence in the operation and performance of our new radio system has been demonstrated to our public safety community, municipal and county officials.

Questions?



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CONTACT INFORMATION

THANK YOU!